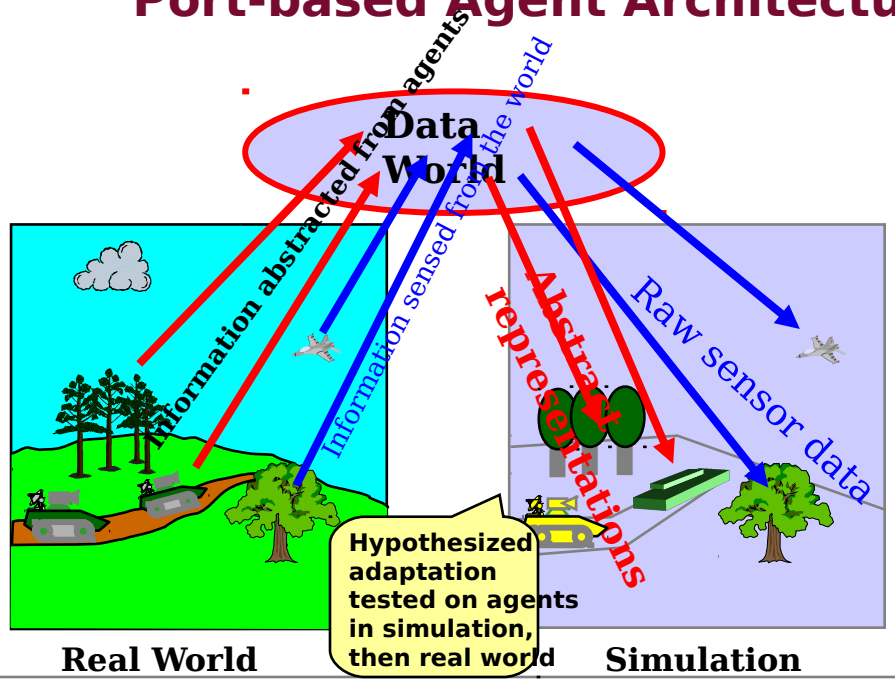
Port-based Agent Architecture for Self Adaptive Software



New Ideas:

- Architecture for Port-based Agents
- Using Runtime Simulations for Adapting and Reconfiguring Agents
- Acquiring an Agent's Skill from Observation
- Interactive Software Components that connect design agents with their runtime counterparts.

Impact

- Port-based Agents will result in the development of new real-time control software composition methods based on "real-time agents"
  - Will allow real-time software to be configured in real-time
  - Will result in new control schemes that cannot be created using conventional methods
  - Will result in rapid evaluation and integration of adaptation algorithms based on run-time execution

Schedule

Year 1: - Develop Port-based agent architecture

- Develop Algorithms for Primordial Learning

Year 2: - Design and Demonstrate "Design Agents" and 'Expertise Agents"

- Demonstrate a Graphical User Interface and Design Agents to configure Applications

Year 3: - Demonstrate Software Adaptation at run-time

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